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<http://www.nwp.usace.army.mil/pm/projects/crncl>

Columbia River Channel Improvement Study – Structural Alternatives

The Feasibility Study addresses two general types of structural alternatives: regional ports and increased channel depths. A regional port would allow deeper draft ships to utilize the Columbia River without having to deepen the channel all the way to Portland/Vancouver. The channel depths considered included the current 40-foot channel and increases to 41 feet, 42 feet, and 43 feet. The existing 40-foot channel represents the “no action” alternative.

Regional Port. The regional port analysis considered development of either topping-off or single-stop facilities at Astoria or Longview. The regional port would need to accommodate all three of the major export commodity groups: wheat, corn, and containers. The topping-off facilities would provide only enough cargo loading capacity to fully load ships to a 43-foot draft, after they had loaded most of their cargo at an upriver port. A single-stop regional port would have cargo facilities capable of fully loading all vessels over a 40-foot draft calling on the Columbia River. The navigation channel would have to be deepened from the mouth to a regional port.

New port facilities for wheat, corn and containers would have to be built at **Astoria** for either a topping-off or single-stop regional port. Those facilities have an estimated construction cost of at least \$134 million for a topping-off port and more than \$400 million for a single-stop port. The new port facilities would require hundreds of acres of land. There also would be additional transportation costs to move cargo from Portland/Vancouver to Astoria, including highway improvements and an estimated \$50 million to upgrade the railroad.

Longview already has some of the infrastructure needed to develop a regional port. There are adequate railroads and highways, and the plan would include deepening the channel to Kalama to take advantage of the existing corn elevator. The topping-off alternative could utilize the existing elevator, but a single-stop port would require additional wheat facilities. New container facilities would have to be built for either a topping-off or single-stop port. Construction costs of a 43-foot channel to Kalama are estimated to be about \$85 million and the costs for new facilities are estimated to be between \$80 million and \$400 million. There also would be additional transportation costs to bring cargo to Longview.

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Channel Deepening. The channel deepening alternatives included the Columbia and Willamette River navigation channels. The three channel depths investigated were 41 feet, 42 feet, and 43 feet, with 5 feet of overdepth included to increase the effectiveness of the channel. The Feasibility Study was limited by congressional action to a maximum channel depth of 43-feet. The construction dredging and rock removal volumes for each alternative are listed below.

Alternative (channel depth)	Construction Dredging (mcy)		Rock Removal (mcy)		Total (mcy)
	Columbia	Willamette	Columbia	Willamette	
41 feet	5.4	0.2	0.1	0	5.7
42 feet	11.2	0.3	0.2	0.1	11.8
43 feet	18.4	0.7	0.5	0.1	19.7

The 20-year maintenance dredging forecasts for the 40-foot, 41-foot, 42-foot, and 43-foot channels total 78 million cubic yards, 81 mcy, 85 mcy and 90 mcy, respectively.

The disposal of construction and maintenance material from a deeper channel would require approximately 31 upland sites, two beach nourishment sites, in-water (flowlane) disposal along the length of the channel, and three ocean disposal sites. The “no action” disposal plan for the existing 40-foot channel is similar except that it utilizes only 18 upland sites. The 31 potential upland disposal sites would encompass up to 1,900 acres. About two-thirds of the potential upland sites have been used for disposal in the past. Where possible, the new upland sites have been located in industrial areas so the material could be put to commercial uses.

The concept of “avoid, minimize, and then mitigate” was used to minimize the environmental impact of the project. Potential dredged material disposal sites were identified on the basis of the following environmental screening criteria, applied to the extent practicable:

- 300-foot setback to meet requirements for Endangered Species Act riparian habitat
- Avoid state/federal wildlife refuges
- Not within 450 meters (1,500 feet) of bald eagle nests
- Avoid wetlands and riparian habitat
- To allow beach nourishment only at 14 cleared sites
- In-water disposal only at depths more than 20 feet

The Corps worked with an interagency team of state and federal wildlife biologists to develop a potential mitigation plan for those habitat losses that could not be avoided. Depending on the final disposal site plan, mitigation will occur on three to five sites, with a total area of approximately 800 to 1,100 acres.

Additional information on the Feasibility Report/EIS can be found on the Internet at <http://www.nwp.usace.army.mil/pm/projects/crncl>.

No final decisions have been made for this project. The Corps and Sponsors want to hear the public's comments on these alternatives. Written comments may be sent at any time to: Portland District, U.S. Army Corps of Engineers, Attn: Project Manager, Laura Hicks, CENPP-PM, P.O. Box 2946, Portland, OR. 97208-2946.